DOCKET NO: UPVG0008-100 (UPVG-0191)

PATENT APPLICATION

Serial No.: 09/485,421 Filed: October 5, 2001

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 conjugated to a therapeutic compound, wherein said therapeutic compound is a nucleic acid molecule.

Claim 2 **(previously presented)** The conjugated composition of claim 1 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence.

Claim 3 (currently amended) The conjugated composition of claim 1 wherein said <u>nucleic acid molecule</u> therapeutic compound is a DNA vaccine plasmid conjugated to said fragment of HIV-1 Vpr by ionic bonds

Claim 4 (currently amended) The conjugated composition of claim 1 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence and said therapeutic compound is a nucleic acid molecule which is conjugated to said polycationic amino acid sequence by ionic bonds.

Claim 5 (currently amended) The conjugated composition of claim 1 wherein said <u>nucleic acid molecule compound</u> is an antisense molecule.

Claim 6 (amended) The conjugated composition of claim 1 wherein said nucleic acid molecule compound is an antisense oligonucleotide.

Claim 7 (currently amended) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

contacting said cell with a conjugated compound, that is either wherein said therapeutic compound is conjugated to a nuclear localization sequence fragment of HIV-

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1 Vpr protein comprising amino acid sequence 17-36 and/or amino acid sequence 56-84 59-84 of said HIV-1 Vpr protein; wherein said therapeutic compound is a nucleic acid molecule and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

Claim 8 (currently amended) The method of claim 7 wherein said <u>nucleic acid</u> molecule compound is a DNA molecule.

Claim 9 (currently amended) The method of claim 7 wherein said <u>nucleic acid</u> molecule compound is a plasmid DNA molecule.

Claim 10 (currently amended) The method of claim 7 wherein said <u>nucleic acid</u> molecule eompound is an antisense molecule.

Claim 11 (currently amended) The method of claim 7 wherein said <u>nucleic acid</u> molecule compound is an antisense oligonucleotide.

Claims 12-27 (canceled)

Claim 28 (**new**) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 conjugated to a therapeutic compound.

Claim 29 **(new)** The conjugated composition of claim 28 wherein said nucleic acid molecule is a DNA vaccine plasmid conjugated to said fragment of HIV-1 Vpr by ionic bonds

Claim 30 (new) The conjugated composition of claim 28 wherein said nucleic acid molecule is an antisense molecule.

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Claim 31 (**new**) The conjugated composition of claim 28 wherein said nucleic acid molecule is an antisense oligonucleotide.

Claim 32 (**new**) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

contacting said cell with a conjugated compound, wherein said therapeutic compound is conjugated to a nuclear localization sequence fragment of HIV-1 Vpr protein consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said therapeutic compound is a nucleic acid molecule and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

Claim 33 (new) The method of claim 32 wherein said nucleic acid molecule is a DNA molecule.

Claim 34 (new) The method of claim 32 wherein said nucleic acid molecule is a plasmid DNA molecule.

Claim 35 (**new**) The method of claim 32 wherein said nucleic acid molecule is an antisense molecule.

Claim 36 (**new**) The method of claim 32 wherein said nucleic acid molecule is an antisense oligonucleotide.

Claim 37 (new) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 conjugated to a therapeutic compound, wherein said fragment of Vpr is less than 50 amino acids.

Claim 38 **(new)** The conjugated composition of claim 37 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence.

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Claim 39 (new) The conjugated composition of claim 37 wherein said therapeutic compound is a DNA vaccine plasmid conjugated to said fragment of HIV-1 Vpr by ionic bonds

Claim 40 **(new)** The conjugated composition of claim 37 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence and said therapeutic compound is a nucleic acid molecule is conjugated to said polycationic amino acid sequence by ionic bonds.

Claim 41 (**new**) The conjugated composition of claim 37 wherein said therapeutic compound is an antisense molecule.

Claim 42 (**new**) The conjugated composition of claim 37 wherein said therapeutic compound is an antisense oligonucleotide.

Claim 43 (new) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

contacting said cell with a conjugated compound, wherein said therapeutic compound is conjugated to a nuclear localization sequence fragment of HIV-1 Vpr protein comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said fragment of Vpr is less than 50 amino and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

Claim 44 (new) The method of claim 43 wherein said therapeutic compound is a DNA molecule.

Claim 45 (**new**) The method of claim 43 wherein said therapeutic compound is a plasmid DNA molecule.

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Claim 46 (**new**) The method of claim 43 wherein said therapeutic compound is an antisense molecule.

Claim 47 (**new**) The method of claim 43 wherein said therapeutic compound is an antisense oligonucleotide.